



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,947	03/13/2008	Eiju Suzuki	Q92273	8599
23373 7590 05/08/2009 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER FISCHER, JUSTIN R				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
05/08/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/562,947

Applicant(s)

SUZUKI ET AL.

Examiner

Justin R. Fischer

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5, 6, and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda (JP 59-196338, of record) and further in view of Imamura (US 3,913,652, of record) and Scriver (US 4,192,366, of record).

Ueda teaches a tread composition comprising between 5 and 60 phr of natural rubber and/or polyisoprene having a cis 1,4 content greater than 90 percent (Abstract). In this instance, the disclosure of Ueda fully encompasses the claimed combination, it being further noted that a cis 1,4 content of about 99 percent is consistent with typical or conventional tread compositions, as shown for example by Scriver (Column 2, Lines 20-25). Ueda, however, is completely silent with respect to the Mooney viscosity of the cis 1,4 polyisoprene. In any event, the claimed viscosity is consistent with the high cis 1,4 polyisoprenes used in the tire industry, as shown for example by Imamura (Column 2, Lines 22-25). Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to use a cis 1,4 polyisoprene having the claimed Mooney viscosity.

Regarding claims 2 and 3, Ueda broadly teaches the use of natural rubber and cis 1,4 polyisoprene at a total loading between 5 and 60 percent (based on 100 phr of

total rubber components). Based on the general disclosure of Ueda, one of ordinary skill in the art at the time of the invention would have found it obvious to use more natural rubber, less natural rubber, or the same amount of natural rubber, as compared to the cis 1,4 polyisoprene content.

As to claims 5 and 6, the rubber composition of Ueda includes carbon black (e.g. HAF) at a loading of 50 phr (Table 2).

With respect to claim 9, the composition of Ueda is sulfur crosslinkable.

Regarding claims 10 and 11, the language "used for tread" and "used for a casing member" do not further define the makeup of the claimed rubber composition.

As to claims 13 and 14, the disclosed loadings would have been obvious to one having ordinary skill in the art since they are consistent with "typical" or conventional loadings, as shown for example by Scriver. It is further noted that applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed loadings.

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda, Scriver, and Imamura as applied in claim 1 above and further in view of Inui (US 5,191,003, of record).

As noted above, the composition of Ueda includes HAF carbon black. While the reference is silent with respect to the nitrogen adsorption specific surface area, HAF carbon blacks are known to have a surface area greater than 70 m²/g, as shown for example by Inui (Column 4, Lines 13-25). Absent any conclusive showing of

unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to use a carbon black having the claimed surface area.

4. Claims 1-6 and 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segatta (US 5,396,940, of record) and further in view of Imamura and Sriver.

Segatta is directed to a rubber composition comprising 5-95 phr of epoxidized natural rubber (claimed natural rubber), 5-95 phr of cis 1,4 polyisoprene, and 5-85 phr of silica (Column 1, Lines 63+). In this instance, given the general disclosure of Segatta, one of ordinary skill in the art at the time of the invention would have found it obvious to use a combination of natural rubber and cis 1,4 polyisoprene.

While Segatta is silent with respect to the cis 1,4 content and associated Mooney viscosity, the claimed characteristics are consistent with the conventionally used polyisoprene rubbers in the tire industry, as shown for example by Imamura (Column 2, Lines 22-25) and Sriver (Column 2, Lines 20-25). Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to use the claimed cis 1,4 polyisoprene.

Regarding claims 2-4, the total content of natural rubber and cis 1,4 polyisoprene is 100 phr.

As to claims 5, 6, and 8, the composition of Segatta includes between 5 and 85 phr of silica having a surface area between 40 and 600 m²/gram. Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to select a surface area of at least 180 m²/gram.

With respect to claim 9, the composition of Segatta is sulfur crosslinkable (Abstract).

Regarding claims 10 and 11, the language "used for tread" and "used for a casing member" do not further define the makeup of the claimed rubber composition.

As to claim 12, the rubber composition of Segatta is used for the manufacture of tire treads and/or carcass plies (casing member).

With respect to claims 13 and 14, the disclosed loadings would have been obvious to one having ordinary skill in the art since they are consistent with "typical" or conventional loadings, as shown for example by Scriver. It is further noted that applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed loadings.

Response to Arguments

5. Applicant's arguments filed April 24, 2009 have been fully considered but they are not persuasive.

Applicant argues that Ueda fails to specifically disclose a cis 1,4 bond content of 99.0% and above in the specification and furthermore, Ueda fails to disclose anything about the cis 3,4, bond content of the isoprene rubber.

As set forth in the rejection above and acknowledged by applicant, Ueda teaches a cis 1,4 bond content of at least 90%, which fully encompasses the claimed range. It is emphasized that Ueda essentially teaches a cis 1,4 bond content between 90 and 100% and it is evident that values at the extreme upper end necessarily have a cis 3,4 bond content below 0.5%. For example, Ueda's disclosure includes rubbers having a

cis 1,4 bond content between 99.5 and 100% and such rubbers necessarily have a cis 3,4 content below 0.5%. Additionally, Ueda expressly teaches a composition including natural rubber AND polyisoprene rubber (see Abstract).

Applicant further argues that Scriver's experimental data only discloses a cis 1,4 bond content of 98%. It is well recognized, however, that a reference is not limited to a single, exemplary embodiment. As detailed in the rejection above, Scriver expressly teaches a cis 1,4 bond content between about 96% and about 99% and such a teaching is consistent with the claimed contents. In regards to the cis 3,4 bond content, such would necessarily result with rubbers having a 1,4 bond content of at least 99.5% and said rubbers are consistent with the disclosure of Scriver (99.5% is seen to be "about 99%).

Additionally, applicant contends that Imamura's experimental data only teaches a 1,4 bond content of 97%. As stated above, that a reference is not limited to a single, exemplary embodiment. Imamura expressly teaches a 1,4 bond content of at least 90% and such a disclosure fully encompasses the claimed ranges. It is emphasized that a disclosure of at least 90% is analogous to a range between 90 and 100%. In this instance, Imamura's disclosure includes rubbers having a cis 1,4 bond content between 99.5 and 100% and such rubbers necessarily have a 3,4 content below 0.5%.

Regarding Segatta, applicant argues that the reference only discloses a bond content of 97%. First, it is unclear if this description refers to NAT2200. Second, such a disclosure is exemplary and one of ordinary skill in the art at the time of the invention would have readily appreciated the use of rubbers having additional bond contents in view of Scriver. It is emphasized that the exemplary embodiment of Segatta is

extremely close to the claimed range and Scriver evidences the common use of a variety of polyisoprenes, including those having a content of "about 99%".

Lastly, Table 1 does not constitute a conclusive showing of unexpected results since any realized benefits would be inherent to the modified compositions detailed above. It is emphasized that the prior art expressly teaches the common use of polyisoprenes having a 1,4 bond content of "about 99%" and improvements in processability, durability, and wear would naturally flow from using such a rubber (in view of applicant's arguments and results). Additionally, Table 1 is not commensurate in scope with the claimed invention since it is unclear if the realized benefits are a function of the specific loadings for each rubber component and/or the type of polyisoprene rubber (cis 1,4 bond content). For example, it is unclear if the realized benefits would be obtained with compositions including less than 50 weight percent of natural rubber and as currently drafted, the claims fail to require any loading for the rubber components- thus, the results are not commensurate in scope with the claims as currently drafted.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin R. Fischer whose telephone number is (571) 272-1215. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/562,947
Art Unit: 1791

Page 9

Justin Fischer
/Justin R Fischer/
Primary Examiner, Art Unit 1791
May 6, 2009